

THE  
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXXIX.]

THURSDAY, NOVEMBER 27, 1873.

[ No. 22.

Original Communications.

ON THE USE OF CATHETERS IN HYPERTROPHY OF THE  
PROSTATE.

By T. B. CURTIS, M.D.

THE object of this paper is to draw attention to certain practical points relating to the treatment to be used in cases of enlarged prostate, and particularly to set forth the value, in such cases, of the *vulcanized India-rubber catheter*. This instrument, which has long been in general use in Paris, is comparatively little used or known in Great Britain and in this country, and its many advantages are certainly underrated.

Hypertrophy of the prostate is a disease for which we may expect to be frequently called upon to give advice; Sir H. Thompson estimates that enlargement exists in some degree in one out of three individuals after 60 years of age, and that it produces marked symptoms in one out of seven or eight at that age and upwards. Fortunately, though we are able, as yet, to do nothing to cure, we can do much to relieve the sufferings and to prolong the life of those afflicted with this disease. The main feature of treatment in such cases is the use of *catheterism* to relieve retention of urine, complete or partial, with all the attendant suffering and disturbance to the system due to attacks of absolute retention, to retention with incontinence of urine by overflow, or to partial chronic retention with general poisoning by stagnating and decomposed urine. In many such cases, catheterism is our great resource; not only may it be indicated as an occasional measure when an attack of local congestion, induced by cold or by excess at table, has caused stoppage of micturition, with extremely distended bladder, but in many cases it may become necessary to resort to the constant use of the catheter, repeated several times daily, for months, or even years; with some patients, the normal function of micturition has to be superseded, during the remainder of life, by the artificial evacuation of the urine through a catheter, which the patient has to learn to introduce for himself when required. Then again, in other cases, when catheterism is found extremely difficult, through the existence of false passage or through any other cause, or when irritability of the bladder

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occasions very frequent calls to evacuate its contents, it may be advisable to tie in an instrument, either permanently or only at night, with a view to permitting undisturbed rest.

It is easy to understand how important is the choice of the instrument which is to be used so continuously, or in such unfavorable circumstances as prevail in cases where the catheter has to be introduced several times a day, perhaps by inexperienced hands, or else left permanently in the urethra; and we can comprehend how desirable it is to reduce to a minimum the risks of injury and of irritation.

Before entering upon a description of the instrument to which we wish to call attention, we beg to be allowed to make a few brief remarks upon the necessity which exists in all cases of retention, whatever may appear to be the cause thereof, of making a methodical exploration of the urethra before attempting to pass a catheter. In many cases, such an exploration may be quite superfluous, and the first catheter used goes easily through the urethra into the bladder; on the other hand, cases continually occur where such is not the case, and where the immediate use of a metallic or of a flexible, straight and pointed instrument may be fraught with difficulty and even danger. A preliminary exploration with a flexible bougie, tipped with a good sized olive-shaped bulb (of No. 18 calibre, of the French scale) is a rapidly performed and perfectly harmless operation, which may serve to reveal the existence of difficulties till then unsuspected, such as latent stricture, accompanying the principal disease, false passage, deep lacunæ, &c.; it is certainly a generally accepted rule that diagnosis, as thorough as possible, should precede measures of treatment, and in this particular case we hold that no attempt to relieve retention should be entered upon without our previously investigating the presumable causes of the retention and the condition of the parts through which the catheter is to pass. Dr. Guyon, who has succeeded Civiale in the ward devoted to urinary surgery at the Necker Hospital in Paris, is in the habit of laying great stress upon this point, and he strongly recommends the use of the olive-tipped bougie as the best instrument for such an exploration as is here advised.

When we have determined the condition of the urethra and recognized that its calibre is sufficient, and that it offers no other obstruction than that caused by the enlarged prostate, we may safely apply ourselves to the selection of the most serviceable catheter and to its introduction. For this purpose, we have the choice of several instruments:—1st, the *silver catheter*, of varying length and curve; 2d, the *English gum catheter*; 3d, the *French gum catheter*, cylindrical or conical, with a bulbous tip; and, lastly, the vulcanized *India-rubber catheter*. The first three kinds of catheters are well known and require no description; the last seems to be quite unused, the English gum catheter being generally considered to be the most use-

ful of all in hypertrophy of the prostate. (See Sir H. Thompson on Diseases of the Prostate; and J. W. S. Gouley on Diseases of the Urinary Organs.)

The vulcanized India-rubber instrument, however, seems, if we may judge by the practice now prevalent in the Paris hospitals, and particularly in the Civiale ward of the Necker Hospital, to be of all catheters the most suitable for cases where retention is due to loss of power of the bladder, or to increase of volume of the prostate, and for cases where difficulty of catheterism results from change of direction of the urethra rather than from narrowing of its calibre, or the existence of false passage. For stricture, a slender instrument, either flexible or metallic, is of course necessary; in cases of false passage, though a somewhat voluminous and flexible instrument like the India-rubber catheter will often glide past the orifice of the false passage without entering it, a silver instrument, which can be directed along the sound wall of the urethra, is often indispensable. But, apart from these cases, it is now the general practice in Paris, in cases of retention, to make first a fair trial of catheterism with a small rubber catheter preferably to any other instrument, and in the great majority of cases this first attempt proves successful.

The following, then, are the cases for which the use of this catheter is to be generally recommended:—1st. In retention caused by paralysis of the bladder accompanying paraplegia. 2d. In retention caused by acute prostatitis. 3d. In retention caused by hypertrophy of the prostate. Having thus briefly enumerated the cases for which the rubber catheter is most suitable, we will proceed to describe the instrument, and to state the reasons for which it appears preferable.

The rubber catheter, first manufactured by Galante, of Paris, was brought into use by Maisonneuve and Nélaton, soon followed by the generality of French surgeons. These catheters are of all sizes, from No. 12 of the French scale upwards, but by far the most useful are those comprised between Nos. 16 and 20; they are perfectly cylindrical, with a rounded end and an even, smooth surface. The instrument possesses the following qualities:—1st. It is perfectly supple, so much so that it can be easily wound round the finger. 2d. It is not acted upon by the urine or by the secretions of the mucous membrane; it neither acquires a phosphatic crust, as the gum catheters rapidly do when tied in, nor does its surface in any way become deteriorated, even by a prolonged sojourn in the urethra, whereas the black gum catheter is found, in a very few days, or even hours, to become so rough by disintegration of its coating as to necessitate removal. The perfect flexibility of the instrument is the cause of the facility with which it finds its way, of itself so to speak, into the bladder, requiring no guidance, but only a succession of short quick pushes, which propel it along the urethra; if any obstacle is encountered by the bluntly rounded tip, the pliable shaft, immediate-

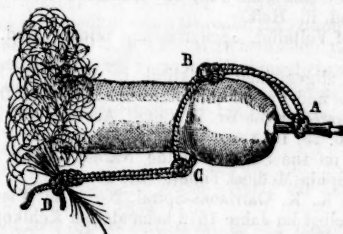
ly bending, ceases to transmit the forward impulsion. It is, therefore, absolutely impossible to inflict an injury with this instrument, or to create a false passage, however awkwardly it may be handled. Nor does its use require any skill or practice; it is only necessary that the instrument, well oiled, should be held with the finger tips quite near the meatus, so as to send in only a half-inch or so of the shaft at each push; at the same time, the surgeon should keep the urethra well stretched, with the left hand, by firm traction upon the penis. It is a mistake to use this catheter with a stylet, as some authors recommend; this way of proceeding deprives the instrument of the valuable quality of pliability, which enables it to insinuate itself through a tortuous urethra, as it will often do in cases where catheterism with a silver instrument is so difficult as to baffle the patient efforts of a most skilful surgeon. Another advantage which accrues from the suppleness of this instrument is that it is of all catheters the one whose continued presence is most easily tolerated by the urethra; it causes much less discomfort to the patient than the gum catheter, and it is not so apt by its presence to set up prostatitis or cystitis, much less to occasion sloughing of the floor of the urethra at the sub-pubic bend; it is well known that the more rigid gum catheter sometimes, in this way, causes perforation of the wall of the urethra, thereby producing a very troublesome fistula, which necessitates a plastic operation of difficult performance and uncertain issue. The second quality of retaining an unimpaired surface, however long the instrument may be left in the urethra, is also a reason why it should be preferred for tying in.

The only defects of this catheter are its rather small bore and the difficulty sometimes experienced in fastening it so as to prevent its escaping from the urethra in consequence of its extreme flexibility. The smallness of the bore, due to the necessary thickness of the soft wall of the catheter, renders it apt to get easily clogged up by mucus, pus, clots, &c., but it can always be readily cleared by sending a little water through it with a syringe. To keep it securely tied in, several devices have been used; one consists in introducing into the distal half of the catheter a metallic tube four or five inches long, with a view to rendering this part of the instrument rigid, and so to prevent its escaping by worming itself out between the meatus and the means of attachment. A simpler mode of accomplishing this result was instituted by the author, and has succeeded extremely well. It consists in dipping the distal portion of the catheter, supported by a wire stylet, into collodion, which hardens in a few seconds, and leaves the part so treated quite stiff; two or three successive dips are necessary to give sufficient rigidity. This preparatory treatment gives a coating of glassy smoothness, which perfectly withstands the action of moisture and of bodily heat. We would like to add, in parenthesis, another analogous use of collodion: a fine bougie, of which the tip, bent into an angular or bayonet shape,



is dipped an inch deep into collodion, acquires in a few minutes and after two or three dips, a *rigid extremity* of any curve that may appear desirable; this little expedient is sometimes very useful in dealing with stricture which is difficult to get through on account of the passage through it being tortuous or deviated from the axis of the urethra.

While upon the subject of tying in, we wish to take the opportunity of calling attention to a very ingenious and simple way of fastening catheters to the pubic hairs. The accompanying wood-cut



shows the *modus operandi*; perhaps a few words of explanation may make the thing more easily understood. A string eighteen or twenty inches long is tied by its middle around the catheter at A, near the meatus. The two ends are knotted together at B, and then carried around the penis, one above the other below; they are then again knotted together, so as to form a loop loosely encircling the corona glandis, and carried together to a lock of pubic hair at D, close to the root of the penis. This means of attachment was devised not long ago by Sir Henry Thompson, who now uses it quite exclusively; on trial, it will be found to be a very neat, simple and efficient way of tying in a catheter.

45 Mt. Vernon Street, Boston, Oct. 17, 1873.

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DRESSING OF STUMPS IN FRANCE.—At the scientific congress lately held in Lyons (medical section), a discussion took place on the subject of the dressing of stumps after amputation. Prof. Verneuil, of Paris, after reviewing the different dressings in use (open dressings, immediate union by sutures, antiseptic dressing of Lister, &c.), expressed a decided preference for the cotton-wool dressing of M. Guérin, as being that which enabled the surgeon most successfully to cope with the detestable sanitary conditions afforded by the Paris hospitals. The only fault he found with this dressing was the slowness with which granulation went on under the cotton wool, but the advantage of greater safety far outweighed this objection.

Dr. Ollier, of Lyons, said that he had also adopted the cotton-wool dressing, over which he is now in the habit of applying a roller steeped in soluble glass (silicate of potassa), to make the dressing less liable to become loose.—*Le Mouvement Médical*, Sept. 27th, 1873.

## Progress in Medicine.

### REPORT ON DISEASES OF THE THROAT.

By F. I. KNIGHT, M.D.

[Concluded from p. 513.]

#### LARYNGOSCOPY.

- (1.) WEIL. { Entgegnung.  
TOBOLD. { Schlussbemerungen. Deutsches Archiv für Klinische Medicin, xi. Band, iii. Heft.
- (2.) Review of Voltolini. SCHNITZLER. Wiener Med. Presse, xiv. Nos. 1, 2 and 4.
- (3.) Von der allgemeinen Poliklinik in Wien. ii. Sektion. Abtheilung für Hals und Brustkrankheiten des Docenten Dr. SCHNITZLER. Spezialbericht, erstattet von Dr. R. COEN, Assistenten, &c. Wiener Med. Presse, Feb. 23, 1873.
- (4.) Lectures on the Surgery of the Nares, Larynx and Trachea. COHEN. Philadelphia Medical Times, Jan. 25.
- (5.) Aus dem K. K. Garrisons-Spital, No 1, zu Wien, Mittheilungen über die daselbst im Jahre 1872 behandelten Kehlkopf, Hals, und Nasenkranken. Von Dr. SIDLO. Wiener Med. Woch., June 28, 1873.
- (6.) The Laryngoscope an American Invention. By G. TROUP MAXWELL, M.D., of Middletown, Del. New York Medical Record, Jan. 15, 1873.
- (6.) Dr. Maxwell claims that the idea of examining the larynx by means of a mirror occurred to him before he had heard of Czermak's experiments, and before any notice of them was published in this country; and that he had an instrument constructed for this purpose. He has made no public mention of this before, in the first place, on account of the war, and afterwards he had waited until now for Tiemann & Co., who had made the instrument, to find a note of it upon their books.

#### PARASITIC DISEASES.

- (1.) SCHEFF. Soor im Kehlkopfe. Wiener Med. Presse, No. 25, 1873. (Allg. Med. Central-Zeitung, June 25, 1873.)
- (2.) FRAENKEL. Vorstellung eines Falles von gutartiger Mycosis des Pharynx. Allg. Med. Central-Zeitung, xlii. Jahrgang, 17 Stück.
- (2.) At the meeting of the Berlin Medical Society Jan. 29th, 1873, Herr B. Fränkel presented a case of benign mycosis of the pharynx. This was discovered accidentally in the beginning of the previous month in one of his pupils in the laryngoscopic course, and had existed since that time without any symptom of disease, except a slight chronic pharyngeal catarrh. Over the tonsils and follicles at the base of the tongue were to be seen separate white elevations, a line in height, and as large as the follicles under them. They did not give one the impression of hard pellicles, but resembled rather formations of mould; when removed, they rapidly re-formed. When examined under the microscope, they were seen to consist of epithelial cells; many little round bodies (micrococci) sticking to them, and also in active motion in the surrounding fluid; and numerous little rods of

various lengths, also partly in motion. Herr F. remarked that without thorough examination such a case might be confounded with diphtheria.

PARALYSIS AND CRAMP.

(1.) On Palsy of the vocal cord from intra-cranial Syphilis. J. HUGHLINGS JACKSON, M.D., F.R.C.P. &c. British Medical Journal, Jan. 25, 1873.

(2.) Eigenthümliche Sprachkrämpfe. Von cand. Med. Moeli in Leipzig. Archiv der Heilkunde, xiv. Jahrgang, i. Heft.

(3.) Aneurism of the Arch of the Aorta, with laryngeal Symptoms; death; clinical remarks. G. JOHNSON. Lancet, Dec. 7, 1872.

(4.) Changes produced in the Recurrent Laryngeal Nerves in Cases of Thoracic Aneurism. R. J. LEE, M.D. Lancet, Jan. 25, 1873.

(5.) A Case of Diphtheritic Paralysis (Headland) Lancet, Feb. 8, 1873.

(6.) Paralysis of left vocal cord; relief to dyspnoea from tracheotomy; death. Autopsy—aneurism of arch of aorta. TRALE. Lancet, Feb. 8, 1873.

(7.) Paralysis of both posterior crico-arytenoids; aneurism of arch of aorta; relief from tracheotomy. On autopsy, only the left vagus and recurrent found implicated in the walls of the aneurism. GEORGE JOHNSON. Lancet, Jan. 4, 1873.

(8.) Paralysis of vocal cords; tumor in the cesophagus, involving both recurrent laryngeal nerves. LE FORR. L'Union Médicale, April 10, 1873.

(9.) Pharynxpolypen mit reflectorischer Stimmbandlähmung. Bd. 11, Heft 7, p. 575. GERHARDT. Deutsches Archiv f. Klin. Med.

(10.) Functioneller Larynxkrampf. GERHARDT. Deutsches Archiv f. Klin. Med. Bd. 11, Heft 7, p. 580.

(11.) Frequently recurring spasm of the glottis dependent upon chronic hyperæmia of the larynx. A. H. SMITH, M.D. N. Y. Med. Record, Aug. 15. [Relieved by four applications of perchloride of iron and glycerine (3i., 3i.).]

(12.) Die Laryngoscopie an Thieren. SCHMIDT. Tübingen. 1873. Pp. 106.

(1.) Dr. Jackson calls attention to the occasional nervous origin, so to speak, of syphilitic aphonia. He says it would be unsafe, when a patient who is manifestly the subject of syphilis, becomes aphonic, especially if he has any nervous symptoms, to conclude, without looking into that organ itself, that he had syphilitic disease of the larynx. It would be as unjustifiable as concluding, without ophthalmoscopic examination, that his blindness, if he were blind too, was owing to syphilitic changes in the eye itself. The fact is that in some cases of "syphilitic aphonia" there is no other abnormality discernible in the larynx than paralysis of one vocal cord. In these cases, the palsy may safely, in a person presenting outward signs of syphilis, be put down to syphilitic disease affecting the rootlets of the eighth nerve. Dr. Jackson is convinced that, in practice, aphonia from intra-cranial syphilis is not exceedingly uncommon. He refers to two cases corroborative in clinical and *post-mortem* appearances of the above statements, which cases were published in the London Hospital Report, vol. iv., 1868, pp. 314 and 318.

(12.) In our last report, we gave an abstract of an article by Schmidt, in which he gave an account of the appearances in the larynx of a cat,

after section of one recurrent laryngeal nerve. In the present monograph, he gives the results of further experiments, giving the results of section of various laryngeal nerve branches and muscles, singly and in combination, as seen in the laryngeal mirror. The series of experiments is quite complete, the notable exception being that of section of the spinal accessory, which it may be very hard or impossible to make in the cat before anastomosis. The only reference to the spinal accessory seems to be an interrogation mark after one of the conclusions quoted from the results of Navratil's experiments, i. e. that this nerve (the spinal accessory) "has no influence on the muscles of the vocal cords."

The experiments are preceded by an account of the anatomy and the normal laryngoscopic appearance of the cat's larynx.

After section of *both recurrents*, the following appearances were noted: on inspiration, the vocal cords approached each other so that they almost touched, and during forcible inspiration approached still nearer each other, and separated a little during expiration. Touching the vocal cords, ventricular bands and the epiglottis with the sound did not excite cough so quickly as in the normal condition. Respiration was much less frequent, deeper, and was for some hours after the operation accompanied by loud râles. The inspirations lasted much longer than the expirations. After a few hours, the respiration became quiet, and remained so unless the animal was disturbed, as by laryngoscopic examination. On the third day, the respiration was quiet, even during the examination. The laryngoscopic examination showed that the glottis was always open, and was somewhat wider than it was on the preceding day, even at the end of expiration.

In the account of the effects of section of one recurrent laryngeal nerve, an additional fact, besides those mentioned in our last report, and one of considerable importance, is given, i. e. that the sensibility seemed to be somewhat diminished on the affected side. After section of *one superior laryngeal* nerve, at the first glance, it was difficult to notice any variation from the normal condition, but careful observation showed clearly that the vocal cord of the side on which the section had been made, was a little longer than that of the opposite side, and that the vocal process of this side stood a little further outward and backward. The sensibility of the side on which the section was made was much diminished. In a second animal, the sensibility on the side of the operation was completely lost.

The voice in the first case immediately after the operation was strong, but hoarse and somewhat lower in pitch.

In the second case, it was much hoarser and deeper, and the animal, which before the operation had frequently mewed, in the two first days after the operation was remarkably quiet, but on the third day mewed again frequently. The variation in the form of the glottis is due to the paralysis of the left crico-thyroid muscle. The left crico-arytenoideus posticus obtains a little preponderance, and draws the left arytenoid cartilage outward a little more forcibly.

After section of *both superior laryngeal nerves*, laryngoscopic examination showed that the glottis had a symmetrical form and offered no noticeable departure from the normal condition. The changes described above, now having occurred on both sides, were so slight as to be unnoticeable. In one animal, the sensibility was much less than in the

normal condition, and in the other it was completely abolished. The voice was deeper and much hoarser than after section of one superior laryngeal nerve. Dr. Schmidt says that the function of approximating the lower edge of the thyroid cartilage to the upper border of the cricoid, and thereby increasing the tension of the cords, is often very erroneously ascribed to the crico-thyroid muscle.

According to others, the muscle draws the upper border of the cricoid cartilage upwards. If the crico-thyroid muscles, having been laid bare, are irritated by the electric current, the latter movement is in fact accomplished.

The function of the crico-thyroid muscles in phonation, therefore, according to this result, would be to maintain the anterior insertions of the vocal cords in a fixed position.

Division of the *crico-thyroid muscle* on one side gave a little different result from division of one superior laryngeal nerve, inasmuch as the vocal cord on that side presented a rectilinear edge, which was not the case when the nerve was divided. Farther experience can alone determine whether this was an individual peculiarity or whether the division of the superior laryngeal nerve in fact causes a little variation in the form of the glottis from that seen in division of the muscle simply.

Division of the *crico-thyroid muscle* and of the lateral *crico-arytenoid muscle* on one side produced the following laryngoscopic appearances. During ordinary respiration, the glottis had the same form as after division of the crico-thyroid alone.

On phonation, however, the arytenoid cartilage, with its vocal cord, did not move up to the median line on the side which had been operated upon, but the other arytenoid cartilage and vocal cord crossed the median line, producing a bend in the line of the glottis with its convexity towards the side which had been operated upon. Moreover, the arytenoid cartilage of the affected side stood farther backward and upward in consequence of the action of the posterior crico-arytenoid. The voice was still deeper and hoarser than in paralysis of the crico-thyroid alone.

Division of both *crico-thyroid and lateral crico-arytenoid muscles* produced the following appearances. The glottis was of a perfectly symmetrical, regular, triangular form. The two sides of this triangle formed perfectly straight lines, so that no projection was noticed in the place of the vocal processes. The arytenoid cartilages were strongly rotated outward, and executed scarcely any respiratory movement.

On phonation, the arytenoid cartilages touched quite symmetrically in the median line; they executed no movement backwards and upwards. Between the vocal cords and the processus vocales there remained a large, triangular opening. The voice was replaced by a very hoarse, deep and rather weak noise, as was to be expected on account of the large opening remaining in the glottis, even during attempted phonation. The sensibility of the vocal cord in the last three cases was completely normal. The last experiment shows that the *thyreo-arytenoidei muscles*, which are here uninjured, bring the vocal cords considerably nearer the median line on attempted phonation. A complete approximation, however, is impossible, because the conjoint action of the lateral crico-arytenoid is wanting.

According to these experiments, then, we find the results (1) of

paralysis of one crico-thyroid muscle to be rotation of the arytenoid cartilage outward, and a rectilinear position of the edge of the vocal cord during ordinary inspiration; (2) of paralysis of both crico-thyroid muscles to be a symmetrical triangular glottis with rectilinear edges of the vocal cords and strong rotation of the arytenoid cartilages outward.

The principal results of paralysis of the lateral crico-arytenoid muscle are as follows: (1.) On one side, during ordinary respiration, no change; during phonation, a curve of the line of the glottis towards the affected side and two chinks, between the vocal cords and between the processus vocales. (2.) On both sides, during phonation, a large, triangular opening remains between the vocal cords and the processus vocales.

So we see that on section of the crico-thyroid muscle changes were found only on ordinary respiration, and, on section of the lateral crico-arytenoid, only on phonation.

*Section of the arytenoideus transversus muscle.*—Immediately after the section, the cartilaginous glottis was widened a little posteriorly.

The interstium inter-arytenoideum became somewhat larger. During quiet respiration, the rima glottidis, between the posterior ends of the vocal cords, the processus vocales and anterior ends of the cartilaginous glottis, is somewhat narrower than normal. It strikes the eye so much the more, as the ary-glottis is somewhat broader. On intonation, the vocal cords and vocal processes touched each other, but a triangular opening remained between the arytenoid cartilages posteriorly. The voice was hoarse, deeper and weaker. Diplophonia (Gibb) at times existed.

*Section of the thyreo-arytenoideus muscles and the recurrent branches going to them.*—On intonation, the edges of the cords, instead of being straight, were concave, thus leaving a small, elliptical opening. The voice was weak, hoarse, and lower than usual.

*Section of both crico-arytenoidei postici muscles.*—On respiration, both vocal cords stood near the median line. The arytenoid cartilages were nearer each other than after section of both recurrent nerves. On inspiration, the vocal cords approached each other, and on expiration separated. After section of the second muscle, the dyspnoea was so great that tracheotomy was performed. There was no voice, even when the tracheal opening was closed.

Dr. Schmidt also tried the application of morphia, and morphia and chloroform to the larynx of the cat without much effect upon its sensibility.

We have given above only a mere outline of a few of the experiments made by Dr. Schmidt. The monograph contains many others, and we recommend its perusal to those interested in the physiology of the larynx.

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THE GERMAN SCHOOLS OF MEDICINE.—The number of students in the Vienna Medical Faculty diminishes sadly from year to year. Since Oppolzer's and Skoda's death, the diminution is very marked. Where one could with difficulty get within ear-shot in days gone by, on account of the number attending, the wards now, it is stated, are almost empty.—*British Medical Journal*.



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**Bibliographical Notices.**

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*An Essay on the Principles of Mental Hygiene.* By E. A. GORTON, M.D. Philadelphia: Lippincott & Co. 1873. 12mo. Pp. 240.

THIS book is a useful addition to the literature on the above subject. The discussion of matters relating to the preservation of mental health necessarily runs in familiar channels. We therefore expect a chapter on the "Mental Influence of Physical Agents," and are prepared for others on "The Reciprocal Influence of Corporeal and Mental Exercise," on "Moral and Religious Influences," and even for the final one on "Marriage," though the title suggests for a moment the cheap books of "Advice, &c.," on that delicate but important subject.

In the first two chapters, tables are given showing the influence of the seasons, of sex, and of age on insanity and suicide. Also on the relations of ignorance to crime, of ignorance and crime to sex, of the seasons to crime, and of crime to insanity. These important relations must eventually come to be understood and acted upon by the public and by law makers, as well as by scientists and physicians, and all sincere attempts to elucidate them for the public benefit should be welcomed.

In these chapters, also, the effects of diet, drugs and stimulants are considered, with unnecessarily long quotations, it seems to us, from poets and novelists, of the wonderful powers of coffee, opium, tobacco and haschish. The author, however, is evidently an anti-tobacco and total abstinence advocate. We might also fairly suspect him of being a homeopathist, since, in speaking of the special effects of drugs, he mentions "the destructive mania produced by over doses of belladonna; the jealous furore of hyoscyamus; the religious melancholy of pulsatilla anemone; the obstinate self-will and combative humor of sulphur or chamomile; the ill humor and passionate irritability of nux strychnos; the moral perversion of mercury; the dejected and sorrowful humor of ignatia, lycopodium and a few other drugs; the lascivious influences of Peruvian bark," &c. &c.

In the third chapter, the author deprecates the tendency to excessive physical culture. To develop the body at the expense of the mind is, he thinks, a grave error, and tends to put back the moral progress of the age. The will, he very justly argues, is impotent to reform defects of character, founded on organic and constitutional bias, either congenital or acquired. He quotes Emerson and other writers in support of the opinion that physical and intellectual culture, at the exclusion of the moral element, is the mistake of the age. Many readers will deny, however, that the natural type and outgrowth of such a culture is seen in the learned murderer, Ruloff! This entirely abnormal character was morally deficient to the verge of, if not to the extent of, actual insanity.

Many instances and tabulated statistics are given to show that a high degree of mental culture is favorable to long life. Also a table showing the "Progressive Decrease in the Sum of Vitality, of three Classes of Inhabitants, of Preston, England," including the gentry, tradesmen and operatives. The numbers in a hundred remaining alive at the end of the first year, are, respectively, 90·8, 79·6 and 68·2.

This order is maintained throughout, and the proportions become more and more striking. At eighty years, for instance, we have 8, 4.5 and 2.1. Allowance must, of course, be made for the inferior sanitary condition of the poorer classes. He puts ("according to statistics recently published in this country") the average duration of the lives of philosophers and physicians at 68. The clergy come next, and lawyers next, while the average age of farmers is but 50. In examining the mortality list of members of the Massachusetts Medical Society from 1781 to 1870, we find the average age of physicians in this State falls short of the above average. In 850 deaths, the average was 59 years.

Our author seems rather in advance of the latest scientific investigators, since he states positively that the moral faculties in a well balanced mind comprise about one fourth of the cerebrum. Also, in speaking of Ruloff, he asserts that dissection of his brain demonstrated inordinate strength and activity of both the passions and the intellect, while the conscience and the moral brain were singularly defective. He gives no authority for these assumed localizations, and it is to be feared they rest on no better than phrenological evidence, which, to the scientific mind is, to say the least, very unsatisfactory and inconclusive.

After speaking generally of the impulses and emotions, and of various forms of religious belief, he mentions in detail the following moral agents and their effects, viz., faith, cheerfulness, temperance, music, art, conversation, literature, love, friendship, society, industry, poverty and prayer, devoting a final chapter to that most efficient moral agent, marriage. It will be seen that the author's method, as well as his matter, is at times unscientific and unsatisfactory. There are, however, many interesting facts, figures, arguments and quotations, which make the book readable and useful, especially as it is in a line of investigation till of late too much neglected.

T. W. F.

#### BOOKS AND PAMPHLETS RECEIVED.

The Comparative Anatomy of the Domestic Animals. By A. Chauveau. Second Edition. Translated by George Fleming, F.R.C.S. With 450 Illustrations. New York: D. Appleton & Co. 1873. Pp. 957. For sale by A. Williams & Co.

The Function of the Eustachian Tube. By Thos. F. Rumbold, M.D., St. Louis. 1873. Pp. 40.

Description of New Instruments for making Examinations of the Cavities of the Nose, Throat and Ear. By Thos. F. Rumbold, M.D. (Reprinted from the St. Louis Medical Archives and St. Louis Medical and Surgical Journal.) 1873. Pp. 16.

The Mortality Experience of American Millionaires. By Nathan Willey. (Republished from the Insurance Monitor.) 1873. Pp. 11.

Annual Report of the Board of Health of Philadelphia for 1872. Pp. 135.

On the Granular Cell found in Ovarian Fluid. By T. M. Drysdale, M.D. (From the Transactions of the American Medical Association.) Philadelphia. 1873. Pp. 8.

North End Mission Magazine for October.

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**Boston Medical and Surgical Journal.**

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BOSTON: THURSDAY, NOVEMBER 27, 1873.

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THE Coroner's jury in the case of Mrs. Crie met on Nov. 19th and heard the remainder of the evidence. Mrs. Lee, a friend of the deceased, testified that, two days before her death, the latter appeared in excellent health, that she had never known her to complain of trouble in her heart, that she dressed loosely, and was not then nursing her child. Mrs. Sawyer was then called. She repeated very closely Dr. Eastham's account of the events preceding the inhalation, and of such efforts at resuscitation as she witnessed. She thought the deceased was laced very tightly. She advised her to take gas, because she had herself recovered from it very nicely, and previously had taken ether and felt it for two weeks.

*Question.* Are you sure it was ether? *Answer.* It was ether and chloroform.

*Q.* Did Mrs. Crie insist on taking ether, or did she say something about chloroform. *A.* She said ether.

DR. G. H. B. FLAGG.

Dr. G. H. B. Flagg is a dentist in Boston. He was in Dr. Eastham's room while Mrs. Crie was dying. He felt her pulse; it was very slow, not more than twenty-five, and feeble, and to him it was apparent that she could not live.

*Q.* Have you been in the habit of giving chloroform yourself? *A.* No, sir.

*Q.* Either purely or combined with ether? *A.* Four times in the last ten years I have given a mixture of chloroform and ether.

Dr. Flagg said that he preferred not to give chloroform, but did not know enough about it to say it was dangerous.

*Q.* Were you in the habit of giving gas to Dr. Eastham's patients? *A.* I usually assisted him.

*Q.* And he has given ether to your patients? *A.* Four times, sir, during the last ten years.

*Q.* Then when you stated you had administered chloroform, you meant it had been administered by Dr. Eastham? *A.* Yes, sir.

*Q.* You knew it was the mixture of chloroform and ether? *A.* Yes, sir.

DR. H. D. OSGOOD.

*Q.* You are a practising dentist? *A.* Yes, sir.

*Q.* You were called into Dr. Eastham's office between eleven and twelve o'clock on Monday, Nov. 10th? *A.* Yes, sir.

*Q.* Will you state to the jury what you saw there? *A.* Mrs. Sawyer came into my room at that time and said that Dr. Eastham wanted to see me, for a lady who had taken ether had fainted.

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Q. Did she mean ether, or chloroform, or a mixture? A. I don't know; she said ether. I went into his office, and saw a lady in the operating chair.

Q. What was her position? A. She was inclined forwards. She seemed very low. I examined her pulse, and could not detect any at all.

Q. Did you detect any respiration? A. No, sir, I did not. Examining her clothing, I found she had on corsets, and that they were quite tightly laced. We applied ammonia and water, and Dr. Eastham slapped her face vigorously with a towel.

Q. Did she at all revive in any way? A. Not to my knowledge.

Q. You could not feel any pulse or detect respiration. Do you think she was dead? A. It was my opinion that she was dead.

Q. That was when you first went in, soon after Mrs. Sawyer called you? A. Yes, sir.

Q. Dr. Osgood, you have been for a long time practising dentistry? A. Yes, sir.

Q. You have been in the habit of giving ether? A. Yes, sir.

Q. Have you been in the habit of giving ether and chloroform? A. Yes, sir.

Q. Do you consider, from the experience you have had in the use of it, that chloroform is safe, either alone or combined with ether or alcohol? A. I consider it so, or I should not have used it.

Q. Do you give it alone? A. Yes, sir, I have done so many times.

Q. Have you given the mixture? A. Yes, sir.

Q. In what proportions? A. One-third chloroform and two-thirds ether.

Q. Has Dr. Eastham given it for you? A. Yes, sir.

Q. You always knew it was ether and chloroform? A. Yes, sir.

Q. Did the patient know it? A. I could not say.

Q. What did they call for? A. I don't know, sir.

Q. They must have required an anæsthetic or you would not have given it. A. True.

Q. Did they call it an anæsthetic? A. No, sir.

Q. What did they ask for? A. I cannot tell, sir. I think quite likely they called for ether.

Q. Did they ever call for chloroform? A. Yes, sir, very often.

Q. When they called for chloroform, did you give them the mixture? A. I may not have given them either, but the gas instead. We never give ether or chloroform when we can get them to inhale gas instead. Sometimes, one demands either ether or chloroform, and then we give it to him.

Q. You give the mixture when they call for the ether or chloroform? A. Yes, sir.

Q. Have you ever seen any ill effects from ether and chloroform mixed? A. No, sir.

Q. The uniform strength has been about one-third chloroform? A. Yes, sir.

Q. By weight? A. No, sir, by bulk. I never considered it a very great matter whether one-third, a little more or a little less.

Q. Do you give anæsthetics now as much as you did ten years ago? A. Do you mean ether, and chloroform and nitrous oxide?

Q. Yes. A. I do a great deal more.

Q. Is the use of ether and chloroform on the increase or decrease with you? A. I don't give as much as I formerly did.

Dr. E. S. Wood.

Dr. E. S. Wood, acting professor of chemistry at the Harvard Medical School, gave the following account of his analysis.

I received a small, glass-stoppered vial containing liquid; a portion of a liver, a spleen and kidney, and the contents of a stomach. The vial contained 1.39 ounces. The odor of the liquid resembled that of ether mixed with chloroform, the odor of chloroform being strongly perceptible. The specific gravity of the fluid = 1.043, which corresponds to that of a mixture of six parts by bulk of ether with four of chloroform, if allowance be made for an increase in the density of the two when mixed. A mixture of sixty per cent. of ether with forty of chloroform had a specific gravity of exactly 1.043 at 68 degrees Fahr., and had lost about  $\frac{1}{15}$  of its volume. A mixture of sixty parts ether with forty chloroform will not occupy one hundred parts by volume, but only 98.945 parts, and its specific gravity, instead of being 1.032, as if no condensation took place, will be 1.043. The mixture contained no hydrochloric or acetic acids and no chlorine, showing that both the ether and chloroform were free from any deleterious impurity, a small amount of alcohol only existing as an impurity. The liquid answered the tests both for chloroform and ether. By bulk, it was sixty per cent. ether and forty per cent. chloroform, and by weight 58.14 per cent. ether and 41.86 per cent. chloroform. The blood had no odor, either of chloroform or ether, and neither of these liquids was detected by analysis; and the same is true of the organs, which were carefully analyzed.

Q. You are somewhat familiar with statistics of anæsthetics, are you not? A. I have seen some statistics.

Q. Have you it in your power to tell the jury the statistics relative to the mortality occasioned by the use of ether or chloroform, or a mixture of the two? A. The only statistics which I have seen were some which were published in Chicago in 1870, and these were re-printed, or rather copied into the last annual report on the practice of pharmacy and toxicology.

Q. Will you please state what these were? A. Roughly, the proportion of deaths to cases in ether was one in twenty-five thousand; to cases in chloroform, one in twenty-five hundred; to cases of a mixture of chloroform and ether, about one in five thousand.

Q. If you had been handed all the articles, without the chloroform and ether, could you have given any opinion as to the cause of the person's death? A. No, sir.

Q. Did I understand you that there were no odors in the blood? A. Yes, sir. The blood was strongly alkaline.

Q. What do you think is the smallest amount of chloroform that would cause death? A. The smallest reported, as I remember, was from fifteen to twenty drops by inhalation; one drachm taken by the mouth into the stomach, and one drachm of a mixture containing one part chloroform to four of ether by bulk, that is, one teaspoonful.

Q. You mean that dose has caused death? A. Yes, sir, immediately, that is within a few minutes.

Q. Is there any record of the presence of any poison in the blood of

any of these cases reported? *A.* It has sometimes, but rarely, been possible to detect chloroform in the blood. The analyses after death from ether, in case of animals, have been unsatisfactory, and in case of death from chloroform it is only sometimes possible to detect it.

*Q.* Have you any idea of the cause of absence of coagulation in the blood? *A.* No, sir. The spectroscopic examination of the blood gave a normal appearance.

DR. HENRY J. BIGELOW.

*Q.* You have heard the testimony in this case; you have it under oath that this lady had breathed from two to four drachms of a mixture of ether and chloroform such as you have heard stated; now what is your opinion as to the cause of death? *A.* She died of breathing chloroform; there is no question about it.

*Q.* You have no doubt that the chloroform which was used in that mixture was the cause of death? *A.* It was the cause of death.

*Q.* She took about two-fifths chloroform and three-fifths ether according to bulk; would that amount of ether be sufficient to cause death? *A.* It would not possibly cause death.

*Q.* Would it be safe for a child six years old? *A.* I cannot conceive that it would effect it deleteriously.

*Q.* Two-fifths chloroform? *A.* Might kill an adult.

*Q.* Have you ever in your experience known of any deaths by chloroform? *A.* I have been present at but one.

*Q.* You are familiar with the literature on that subject. From your reading, how many cases are you prepared to answer for? *A.* I am wholly unable to give a number. They are numbered by hundreds, and it is proved that many are not reported.

*Q.* Have you ever known of a case of death from ether properly administered? *A.* No, sir.

*Q.* Do you, from your own knowledge or by reading, believe there ever was a case of death from ether properly administered? *A.* There is a fallacy in the proposition put in that way. Ether is a powerful agent, and if a man is feeble or dying, it would contribute to his death like a dose of opium or anything else that has weight and force and power in it. But that is not the real question as between ether and chloroform, for both of them are powerful agents. The real question is, has chloroform, besides this narcotic power, some very poisonous influence which acts upon the system and in which it differs from ether; has chloroform such a power, has ether, or have both? I answer, chloroform has and ether has not; chloroform kills suddenly and ether cannot.

DR. S. CABOT.

*Q.* As a result of your experience, do you think it dangerous in any way to give ether by inhalation? *A.* I don't, sir, with, of course, proper precautions.

*Q.* From your knowledge and personal experience, do you consider it safe to give chloroform? *A.* No, sir, I do not.

*Q.* Even properly; with all precautions possible to be taken? *A.* I don't think it safe.

*Q.* Judging from your knowledge, what do you think caused the death of Mrs. Crie? *A.* Inhalation of chloroform.

*Q.* Do you think that two-fifths of a tablespoonful of chloroform, as taken by bulk, would be sufficient to produce that effect? *A.* I do, sir.



Q. In your judgment, can a person in ordinary good health take ether enough to produce death, say in the course of ten or fifteen minutes? A. No, sir.

Drs. Henry G. Clark, George H. Gay and R. M. Hodges testified to the same effect. On the next evening, the jury met again, and presented the following verdict:—

That Mary F. Crie came to her death on Monday, the 10th day of November, 1873, between eleven A.M. and one P.M., in the office of Dr. Charles Eastham, a dentist, No. 25 Tremont street, Boston, and that her death was caused by the inhalation of chloroform administered in a mixture of chloroform and ether by the said Dr. Eastham. The jury use this opportunity to caution the public against the inhalation of so dangerous an agent as chloroform for the production of insensibility to pain. In the opinion of the jury the inhalation of sulphuric ether is safe, while the inhalation of chloroform, either alone or mixed, is always attended with danger.

It was signed by Ezra Palmer, M.D., John A. Lamson, M.D., Geo. Fabyan, M.D., George Lotz, M.D., Thomas Restieaux and Thomas Doliver.

This case has attracted much attention, not only from the attempt made just after the accident to pass the death off as one from ether, but also, when it became evident that it was due to chloroform, from anxiety to see what would be the conclusions of a Boston jury. The verdict is all that could be desired, as it expresses emphatically the feeling of the profession, and we do not find fault that Dr. Eastham was spared the well-deserved censure which he must have expected. The misfortunes of the past should be remembered only as warnings for the future. The use of chloroform is least justifiable where ether is best known; there is less excuse for its use in America than in Europe, and least of all in this city. After this verdict, nothing but very exceptional circumstances will warrant its administration. It appears in the evidence that several dentists are in the habit of giving whichever anæsthetic they see fit, regardless of the request of the patient. We hope that this custom is not general, and would advise any who may persist in it not to be too sure that after another patient, who shall have asked for ether, has been killed by chloroform, the verdict may not contain, besides other disagreeable words, the adjective "criminal."

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THE recent importation of cholera into several of the ports of England has given conclusive evidence of the impossibility, in these days of rapid transit from one country to another, that quarantine regulations can accomplish the ends for which they were established. The speed of journeying from remote parts of Europe to England outruns the ordinary period of incubation of many of the infectious diseases, so that an individual may have contracted disease in some distant lo-

cality and yet give no evidence of his sickness till several days after his arrival in port. Of late, persons from Hamburg and Havre have entered England, as subsequent events proved, with the poison of cholera already received into their system, yet they travelled from one part of the island to another before the disease declared itself.

One of the medical journals (the *Lancet*), in commenting on the above cases, states that no system of quarantine against Continental ports could be maintained in England, with any prospect of benefit, which did not provide for the entire cessation of all traffic for an indefinite period. "That any form of medical inspection of ships from infected ports can ever be carried out which will detect and stop cases of diarrhœa like that from which the sailor suffered who travelled from Havre to Liverpool by way of Southampton, is in the highest degree improbable. Even if it were possible to attempt such a restriction of commerce as would be needed to compass the end, the restriction would be futile, as one of its first consequences would be the development of a system of smuggling which would render the quarantine of no effect. In dealing with the importation of cholera by sea, our efforts must be limited, for all practical purposes, to stopping manifest cases of the disease."

In fact, the British authorities are finding just such obstacles in the way of the utility of quarantines as were pointed out by this JOURNAL more than a year ago. We would call attention to articles on pages 200 and 221 of the issues of this JOURNAL for September 19 and 26, 1872, concerning this subject.

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We have been shown a private letter written by Dr. Bennett to one of his many medical friends here, in which he states it to be his intention to take up his future residence in Nice. Dr. Bennett has been induced to take this step by the present condition of his health which, we are pained to say, compels his removal to a warmer climate; and although he has not resigned his professorship in Edinburgh, his absence must necessarily involve the temporary surrender of his professional instruction and practice there. But what may be a misfortune to Dr. Bennett and a source of sincere sorrow and regret to the profession and a most extensive circle of patients and friends at home, will prove a real blessing to the multitudes of his travelling countrymen, as well as to the great tide of American invalids which every winter finds temporary rest in the most beautiful city of the south of France.

While we cordially sympathize, therefore, with our professional brother in his enforced exile, we congratulate the citizens of Nice upon this distinguished addition to the medical corps of their city.

## Correspondence.

NEW ORLEANS, LA., Nov. 4th, 1873.

MESSRS. EDITORS.—The history of yellow fever in the Southern and Western States, during the present year, is worthy of careful consideration, and I propose to present to your JOURNAL a few notes, which may possibly prove of interest to the future medical historian.

The yellow fever of 1873 has not confined its attacks to the sea-coast, but has committed its ravages at various points in the interior, as at Shreveport, Louisiana; Memphis, Tennessee; Marshall and Calvert, Texas; Montgomery and Pollard, Alabama; and Bainbridge, Georgia. The extension of the disease along the lines of travel has spread alarm and dismay, and brought prominently to the attention of cities and States the question of efficient quarantine upon lines of railroad as well as upon the great water courses.

We will present, in the first place,

## NOTES UPON THE YELLOW FEVER OF 1873, IN NEW ORLEANS.

Up to the week ending Nov. 2, 1873, *two hundred deaths* from yellow fever have been officially recorded by the Board of Health of New Orleans.

The following official memoranda, from the Mortuary Records of New Orleans, present the total mortality of the city from all causes, the total number of cases of yellow fever, and the total deaths from yellow fever and other fevers, recorded chiefly as malarial fevers, from the week ending July 6th to the week ending November 2d.

## MEMORANDA FROM MORTUARY RECORDS OF NEW ORLEANS, 1873.

For the week ending	Total Mortality, all causes.	Total Mortality, fevers other than yellow fever.	Total cases yellow fever.	Total Deaths; yellow fever.
July 6th,	163	11	1	0
July 13th,	200	32	2	1
July 20th,	144	13	0	1
July 27th,	128	6	1	1
August 3d,	138	9	5	0
August 10th,	128	13	6	3
August 17th,	126	18	10	2
August 24th,	113	14	8	8
August 31st,	131	22	16	6
September 7th,	154	32	38	16
September 14th,	171	32	60	35
September 21st,	149	21	37	26
September 28th,	150	23	32	22
October 5th,	138	21	42	15
October 12th,	155	25	32	24
October 19th,	141	14	34	18
October 26th,	143	15	19	11
November 2d,	136	11	15	11
Total.	2608	332	368	200

The first case of yellow fever, officially reported, was traced to the bark Valparaiso, which arrived at Quarantine from Havana, June 16th, and, after remaining the usual period (during which time carbolic acid was poured into the pumps and freely scattered below in the forecabin, and the vessel twice fumigated with chlorine), she was permitted to proceed up the Mississippi River to New Orleans. As the ship was in ballast, it is said to have been easy to scatter the carbolic acid freely and thoroughly. Ventilation in the body of the ship is said to have been promoted by the measures instituted.

On the 4th of July, the mate of the Valparaiso (at that time lying at the head of Third St.) was taken sick with yellow fever, and was conveyed to the house of a friend on Moreau Street, near Spain, in the Third district, where he died on the 8th, having had black vomit prior to death.

The Valparaiso arrived in this port on the 26th of June; the mate of the vessel, who was a native of Spain, aged 18, and unacclimated, was therefore seized with yellow fever on the ninth day after arriving in New Orleans, and on the twentieth day after leaving the port of Havana.

The bed, bedding and clothing of this patient, after his death, were burned, and the house was fumigated with carbolic acid.

After the patient had left the Valparaiso, her cabin was disinfected with carbolic acid atomized, and her hold fumigated with chlorine.

The second case (H. W., aged 28, native of Alabama) was taken sick on board the dredge boat Essayons, at the mouth of the Mississippi River, on the 10th of July, and died on the 15th, at the Charity Hospital. This patient had been residing in New Orleans, and on the 8th of July went to the Passes, and worked on the United States dredge boat; he was therefore taken sick only two days after commencing work, and left the city four days after the first case occurred on the Valparaiso.

The third case was Edward H., mate on the steamer Belle Lee, taken sick July 12th; died on the 20th. The steamer Belle Lee lay three hundred yards from the Valparaiso, undergoing repairs. It is not known that this patient had ever visited the Valparaiso, or had any connection with her crew.

The fourth case occurred in my private practice. The following is an outline of this interesting case.

Mrs. W., residing at 230 Common Street, has lived in New Orleans eighteen months; large, well-developed woman, with clear complexion and high color in health. Mrs. W. called at my office, July 21st, stating that she had just passed through the menstrual period, which had been protracted for ten days, was very profuse, and confined her to bed. She complained of great weakness, "heaviness" of feeling, vertigo and pain in the head, back and limbs, symptoms which appeared to be attributable, at least in part, to the hemorrhage, as I have attended her upon previous occasions when suffering from analogous symptoms, resulting from profuse hemorrhage in menstruation.

July 22d, 1 P.M.—I was called to Mrs. W., and found her suffering with slight febrile excitement; pulse 90, full and strong; face flushed, pain in head, back and limbs.

July 23d, 9 A.M.—Face greatly flushed and of scarlet hue; capillaries of the extremities and face and surface generally, congested; patient greatly agitated, and alarmed; says that she has yellow fever, and will surely die. It was difficult, if not impossible, to calm her fears. Skin warm, but bathed in profuse perspiration; pulse 108, full and strong; great pain in back and head. 3.30 P.M.—Pulse 110; temperature 103.50°; urine abundant, light yellow, slightly tinted, from presence of vesical and vaginal mucus; a trace of albumen. Menstrual flow returned for an hour or two during the morning, but ceased again; tongue red at tip and edges, furred in centre.

July 24th, 9 A.M.—Pulse 118; respiration 30; temperature 106.8° F.; skin hot and dry. The fever rose in the evening; patient talked and muttered in her sleep, and frequently awoke suddenly with a start and cry; moans and sighs with every breath; is greatly agitated and alarmed. Pain in head, back and limbs intense; nausea constant and distressing, but no vomiting; heavy, disagreeable odor emitted by the body, as in yellow fever; an eruption has appeared upon the forehead; the surface of the face, trunk and extremities is as highly injected, and as red as in scarlet fever or measles, but the brilliant redness is more uniformly diffused over the surface than in either of these diseases. Tongue coated in centre, with yellow fur, and red at tip and edges, swollen, moist and soft, with margins indented by the teeth.

July 25th, 10 A.M.—Condition unchanged; pulse 118, full and strong; respiration 36; temperature 108° F. The delirium and restlessness of the

patient prevented the thermometer being held firmly in the axilla; the actual temperature was therefore somewhat above  $108^{\circ}$ , and probably reached from  $110^{\circ}$  to  $113^{\circ}$  in the cavities of the heart. Two hours after the preceding observation, I was summoned to the bed-side of the patient, and found her in *articulo mortis*; pupils contracted; spasmodic respiration, with death-rattle in throat. I was informed that she had started suddenly in a disturbed sleep, made small ineffectual efforts to vomit, and passed immediately into this state. She was unable to swallow. Sinapisms were freely applied, but without effect.

In the last moments of life, the scarlet flush of the surface gradually faded, and at the moment of death, which occurred at 1 o'clock, P.M., the surface presented a yellow, jaundiced hue; after death, body mottled; decomposition rapid.

I attributed the sudden death of this patient to the high degree of heat and the consequent disorganization of the blood, and derangement of the nervous and muscular forces, consequent upon the action of the febrile poison.

It is worthy of note that the preceding case of yellow fever was developed sixteen days after the mate of the Valparaiso was attacked, and that the patient was confined to her room for a period of nearly three weeks preceding the fatal disease, and her residence was at least half a mile from the Mississippi river, and about two miles from the head of Third street, where the bark lay.

After careful investigation, I could find no evidence whatever that this patient had received the infection from any imported or foreign cause, and I regarded the disease as having originated *de novo*; in other words, that this was truly a sporadic case, originating in New Orleans. None of the inmates of the house had been previously sick with any fever, and no case occurred subsequently at this locality.

Fifth case, J. M., carpenter on steamer Pike, which was undergoing repairs about 30 yards from the steamer Belle Lee; attacked July 27th; recovered.

Sixth case, J. D., employed in loading bark Valparaiso; taken sick July 29th; recovered.

Seventh case, S. G., taken sick July 31st; died August 4th.

Eighth case, J. E. K., taken sick July 30th, on steamer Pike; recovered.

Ninth case, J. S. had been in New Orleans about four months and worked in the sun about one hundred yards from the Belle Lee; taken sick August 1st; died August 5th.

Tenth case, C. M., taken sick on steamer Pike, July 29th; died August 7th.

Eleventh case, C. H., seized on the 8th of August; died on the 14th; had been engaged in painting the Belle Lee.

Twelfth case, S. M., Aug. 9th; died Aug. 15th.

Thirteenth case, Chinaman, died at Charity Hospital, Aug. 15th.

Fourteenth case, C., 187 Rosseau, seized Aug. 15th; recovered.

Fifteenth case, J. O. D., taken sick at residence, Aug. 15th; died August 19th.

Sixteenth case, J. P., died in Charity Hospital Aug. 21st.

Seventeenth case, J. R., seized August 17th; died August 19; had nursed case 15.

Eighteenth case, J. J. H. died Aug. 22; had visited steamer Pike.

It is evident from the preceding records of the Board of Health, that the majority of the first cases appear to have contracted the disease in the same locality of the city. It is also worthy of note that in 1870, yellow fever was confined to a portion of the city four by twelve blocks wide and deep in the second district of the city, and to a locality three by six blocks wide and deep in first district; in 1871-2, the disease was limited to portions of the fourth district, contiguous to, if not embracing, the locality where it first appeared in 1873. There are no facts to show that the yellow fever of 1872 was imported; the evidence, on the other hand, goes to show that in this year, at least, it originated in New Orleans.

Whilst for a time the disease appeared to be localized, *sporadic* cases have

occurred in various portions of the city, and across the river in Algiers. In my private practice, I have attended cases on Common street, Russian street, Girard street, Dauphin street, St. Charles street, and in Algiers.

The relative mortality, as reported by the Board of Health, is certainly very great; viz. 200 deaths in 368 cases; 54.5 per cent., or one death in 1.84 cases.

It is probable that the actual number of cases has been much larger; it is also probable that a number of deaths, referred to the various forms of malarial fever, were in reality caused by yellow fever. If the total number of cases of yellow fever have not been fully and accurately reported to the Board of Health, the failure may be referred to two causes:

1st. To the great prevalence of dengue, and the failure in many cases to distinguish the milder cases of yellow fever from this disease.

2d. To the decided opposition of many to the measures of disinfection practised by the Board of Health. The opinion is held by many that the carbolic acid so abundantly used as a "*disinfectant*," not only has no effect in arresting or eradicating the disease, but also acts injuriously upon the sick in those localities where it is fully employed. I do not propose to discuss the question of the arrest or prevention of yellow fever by sanitary measures upon this occasion.

The fact that yellow fever has prevailed to so limited an extent during the past season has been explained upon the ground that the wide-spread epidemic of dengue pre-occupied the field, and that, in the almost total absence of emigration, there is comparatively but little material for the dissemination of the yellow fever in New Orleans.

In my next letter, I hope to present some observations illustrating the natural history of the disease. Respectfully, JOSEPH JONES, M.D.

## The Hospitals.

### MASSACHUSETTS GENERAL HOSPITAL.

(Saturday, November 22, 1873.)

OPERATIONS were performed in the following cases:—Fistula in Ano, Abscess of Thigh, Caries of great Trochanter, Disease of Knee-joint, Nasal Polypus, Stricture of the Urethra, Necrosis of Toe. On Wednesday, Dr. Bigelow operated for Ruptured Perineum.

*Fistula in Ano.*—Dr. Cabot passed through the sinus a ligature, which was drawn firmly, tied and left to ulcerate.

*Abscess.*—Located in the lower third of the anterior part of the thigh, in a child. It was opened by Dr. Bigelow, and eight ounces of pus discharged. On exploration of the cavity, it was found to be unconnected with bone.

*Caries.*—In a patient with carious bone about the trochanter, the sinus was freely counter-opened, and the carious surface removed with a gouge by Dr. Cabot.

*Disease of Knee-joint; Amputation.*—Dr. Bigelow amputated just above the knee for disease of the joint. Before operating, he directed that the limb be tightly bandaged from the toes to the hip; after the tourniquet was applied, the bandage was removed. By this proceeding, the amputation was what might be termed a dry one; the blood which is commonly lost being saved to the patient. For twenty years, this practice has been followed at this hospital in amputations, excisions, necrosis and removal of tumors in both the upper and lower extremities, in short, wherever it was desirable to save the blood of a feeble patient, or to facilitate dissection, as in the removal of a needle from the hand. In alluding to this long-established practice, Dr. Bigelow remarked that this expedient is occupying at the present time considerable attention abroad, both of the surgical public and of the medical journals. He believed that Esmarch's modification of this compression, by the substitution of an elastic rubber bandage, would soon fall into disuse; first, because a common bandage is effectual; second, because the ma-



pority of amputations are done by practitioners to whom such a bandage is inaccessible; and, third, because the material loses its elasticity in a few months. The same remarks apply to the circular elastic compression of an artery, which has been repeatedly tried in this hospital. If one turn of an elastic bandage exercises a pound pressure, it is plain that twenty turns will compress with a force of twenty pounds. But a common tourniquet will do this, and the modification of Signorini's tourniquet habitually used in this hospital ensures, after removal of the compressing bandage, a dry amputation. This case also illustrated another point of current interest. The pulse being very much reduced by protracted disease, and the joint painful upon motion, exceptional care in etherization was needed as well for the patient's safety as his comfort. Instead of being brought to the etherizing room which adjoins the operating theatre, as is usual, the patient was carefully etherized in his bed before leaving the ward.

*Nasal Polypus.*—The patient with polypus of the left nostril had, also, a septum deviating to the right. Evulsion of the polypus was performed by Dr. Cabot.

*Stricture of the Urethra.*—In the case of an old man, and had followed a contusion received three months before. Perineal abscess was followed by a fistula through which all the urine had for six weeks been voided. The stricture in front of this fistula did not admit the smallest capillary bougie. A silver catheter was carefully forced through the stricture and passed into the bladder by Dr. Bigelow. The stricture was then dilated with Voilemier's instrument, and an elastic catheter left in the urethra.

*Necrosis.*—Dr. Cabot amputated the great toe for necrosis involving the second phalangeal joint.

*Ruptured Perineum.*—A patient with ruptured perineum, occurring during labor five months ago, had been unsuccessfully operated upon by her medical attendant, a month after confinement. The rupture of the sphincter was rather more than two inches in length. Dr. Bigelow commenced the operation by dilating or extending the sphincter ani, which was spasmodically contracted near the coccyx. The surface being refreshed, the rectal and the vaginal mucous membranes were respectively united by close silver stitches. Two deep wire sutures were now passed transversely through the centre of the denuded surface, drawn tight and held by small bullets at the distance of an inch or more from the wound upon each side. The cutaneous incision was stitched with wire. The patient's knees were to be kept together during treatment by a loose bandage. Dr. B. remarked that the swelling of the parts would probably require the removal of the two deep sutures in about three days, but a similar deep wire stitch would be placed in the perineum for a few minutes, to support it during the first artificial evacuation of the bowels, under ether, about ten days hence.

H. H. A. BEACH, M.D.

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### Medical Miscellany.

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DR. CLIFTON E. WING, recently one of the house officers of the City Hospital, has been appointed house physician to the Women's Hospital, New York.

THE *Philadelphia Medical Times* of Nov. 8th refers to two additional suppressed deaths from chloroform, occurring in the practice of a surgeon in that city.

DIVISION OF THE SPINAL CORD IN THE NECK (*Indian Medical Gazette*, September 1, 1873).—N. B. Baillie records the case of a woman who lived for six hours after receiving a blow with a hatchet which cut through the third spinous process and the back part of the fourth cervical vertebra, dividing the spinal cord completely, and penetrating into the body of the vertebra in front of the spinal canal.—*Phil. Med. Times*.

**THE PUBLIC BATHING DEPARTMENT.**—The bathing houses have been moored off City Point, and several persons have been assigned to superintend them during the winter. There were seventeen bathing houses in use last year, twelve of which were for males and five for females. The number of bathers, last season, was as follows:—

June—Men, 74,783; boys, 235,171; women, 5242; girls, 30,718; total, 345,914. July—Men, 138,868; boys, 344,145; women, 16,900; girls, 56,616; total, 556,529. August—Men, 87,500; boys, 245,277; women, 11,717; girls, 39,686; total, 384,180. September—Men, 22,988; boys, 69,583; women, 2152; girls, 8580; total, 103,303. Grand total for the season, 1,389,926. Last year, the figures were as follows:—June, 336,573; July, 539,053; August, 537,042; September, 106,154. Total for 1872, 1,519,123. It will be seen that during the year 1873 there was an increase over 1872 in the months of June and July, and a decrease of about 150,000 in the month of August.—*Sunday Herald*.

**THE DEATH FROM MORPHIA.**—The magistrates have thought it right to commit for trial for manslaughter Surgeon-Major Macleod, who administered excessive doses of morphia to his wife, with the intention, as stated by himself, of procuring her a night's rest. Bail was accepted in the case. According to the papers, a larger quantity was given than was at first stated. The one grain not producing sleep, it is now stated that double that dose was given and repeated, and naturally it was fatal.—*Dublin Medical Press and Circular*.

The Government of India have met for the purpose of organizing a system of relief in view of the threatened famine in that country.—*Dublin Med. Press and Circular*.

**A NEW DESTROYER OF THE HAIR.**—Under the above title, Dr. Bøttger, in the *Memorabilien*, says that we possess a new material for destruction of hair, of a most suitable description, in a mixture of one part of crystallized sulphhydrate of sodium with three parts of fine carbonate of lime mixed and reduced to a very fine powder. This mixture may be kept any length of time without alteration in well-closed bottles. When moistened with a drop of water and laid by means of the back of a knife on the part of the skin covered with hair, we in a few minutes find the thickest hair turned into a soft mass, easily removed by means of water. If it remain on the part long it will cause a slight irritation of the skin.—*London Med. Record*.

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DIED,—In this city, Nov. 17th, Dr. D. McB. Thaxter, aged 45 years.

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**MORTALITY IN MASSACHUSETTS.**—Deaths in sixteen Cities and Towns for the week ending November 15, 1873.

Boston, 128—Charlestown, 10—Worcester, 16—Lowell, 20—Milford, 3—Chelsea, 9—Cambridge, 15—Salem, 11—Lawrence, 6—Springfield, 7—Lynn, 7—Fitchburg, 6—Newburyport, 3—Fall River, 30—Haverhill, 8—Pittsfield, 8. Total, 287.

*Prevalent Diseases.*—Consumption, 49—scarlet fever, 27—pneumonia, 23—typhoid fever, 19.

Of the deaths from scarlet fever, thirteen were in Boston and nine in Fall River.

GEORGE DERBY, M.D.,  
Secretary of the State Board of Health.

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**DEATHS IN BOSTON** for the week ending Saturday, Nov. 22d, 132. Males, 63; females, 69. Accident, 5—abscess, 1—apoplexy, 2—inflammation of the bowels, 1—bronchitis, 5—disease of the brain, 4—cancer, 1—cerebro-spinal meningitis, 3—cholera infantum, 1—cyanosis, 1—consumption, 19—convulsions, 6—croup, 2—debility, 5—diarrhoea, 1—dropsy, 2—dropsy of the brain, 1—dysentery, 1—diphtheria, 1—epilepsy, 1—erysipelas, 1—exhaustion, 1—scarlet fever, 8—typhoid fever, 7—gastritis, 1—disease of the heart, 4—intemperance, 1—disease of the kidneys, 3—laryngitis, 1—congestion of the lungs, 3—inflammation of the lungs, 9—marasmus, 3—measles, 1—old age, 4—paralysis, 1—premature birth, 4—peritonitis, 2—poison, 1—puerperal disease, 3—rheumatism, 1—scrofula, 1—suicide, 3—tumor, 1—unknown, 5.

Under 5 years of age, 48—between 5 and 20 years, 13—between 20 and 40 years, 28—between 40 and 60 years, 23—over 60 years, 20. Born in the United States, 90—Ireland, 32—other places, 10.